DOCUMENT RESUME

ED 384 715 CE 069 278

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TITLE Designing a Technical Advanced Placement Program. PACE "How To" Handbooks for Tech Prep.
INSTITUTION Partnership for Academic and Career Education, Pendleton, SC.
SPONS AGENCY Department of Education, Washington, DC.
PUB DATE Dec 94
NOTE 48p.; For related documents, see CE 069 279-281 and CE 069 453-458.
PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Advanced Placement Programs; *Articulation (Education); Community Colleges; High Schools; Models; Postsecondary Education; Program Development; Records (Forms); *Technical Education; *Tech Prep; Two Year Colleges
IDENTIFIERS *Partnership for Academic and Career Education SC

ABSTRACT

This handbook, which is one in a series of handbooks designed to help tech prep practitioners replicate successful materials, projects, or programs that have been developed by Partnership for Academic and Career Education (PACE) consortium members, explains how to design a technical advanced placement program. Outlined first are the structure of the PACE consortium and the objectives and components of the PACE Technical Advanced Placement (TAP) program. Discussed next are the following topics: the need for articulation in tech prep programs, obstacles/controversies regarding articulation, participants in articulation programs, the granting and use of articulated credit, elements of articulation agreements between high schools and community colleges, articulation of traditional academic courses, and benefits of using the term "technical advanced placement" instead of "articulation." A model for 2+2+2 articulation is presented, and various aspects of 2+2+2 articulation models are considered, including their relationship to tech prep initiatives, benefits to students, chief obstacles, and main components. Tips for designing successful high school-community college articulation programs are provided. Appendixes constituting approximately 50% of this document include the following: sample PACE articulation agreement, excerpts from the PACE student and faculty/staff TAP handbooks, sample transcript with TAP credit, and 2+2+2 model. (MN)

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PACE "How To" Handbooks for Tech Prep

Designing a Technical Advanced Placement Program

by
Anita J. Turlington
Dissemination Coordinator

CF 069 278

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December 1994

This material was produced with grant funds awarded to PACE/Tri-County Technical College by the U.S. Department of Education. The opinions and information presented herein do not necessarily reflect the positions or policies of the United States Department of Education, and no official endorsement should be inferred.

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PACE "How-To" Handbooks: The PACE Technical Advanced Placement (TAP) Program

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PACE "How-To" Handbooks: The PACE Technical Advanced Placement (TAP) Program

Introduction

PACE "How-To" Handbooks are developed through funding by one of nine model Tech Prep demonstration grants awarded by the U.S. Department of Education. The two-year grant provides funds for specific dissemination and technical assistance activities. The official name of the federal program through which the grant was awarded is the "U.S. Department of Education Demonstration Projects for the Integration of Vocational and Academic Learning Program (Model Tech Prep Education Projects)". The grant is administered locally through Tri-County Technical College in Pendleton, SC.

The handbooks are intended for Tech Prep practitioners to use in order to replicate successful materials, projects or programs that have been developed by PACE Consortium members.

PACE (The Partnership for Academic and Career Education), established in 1987, is a business and education consortium involving the seven school districts of Anderson, Oconee and Pickens Counties; local businesses and industries; the Anderson County and Oconee County Business and Education Partnerships; Tri-County Technical College; Clemson University/College of Education; The Career and Technology Center; and the National Dropout Prevention Center at Clemson University. A coordinating board provides leadership for implementing Tech Prep/School-to-Work programs in the 16 high schools, 4 career centers, and 1 technical college in the PACE Consortium service area. A small administrative staff, housed on the campus of Tri-County Technical College, provides assistance and support to all participating sites.

One of the most successful PACE Consortium activities is the high school-technical college articulation program called Technical Advanced Placement (TAP). In addition, a new program has been developed as part of PACE's Department of Education Demonstration grant that provides opportunities for Tech Prep students who receive TAP credit to transfer, with that credit intact, into selected baccalaureate majors at Clemson University. This handbook will comprise two sections. The first section will describe the PACE TAP program, processes and publication. Section two will describe the 2+2+2 articulation program.

The following questions will also be answered:

- Why is an articulation program needed?
- What role does articulation play in Tech Prep programs?
- What are the chief obstacles/controversies in this area?
- Who should participate in articulation programs?
- How should TAP credit be granted and used?
- What is involved in actual articulation agreements between a high school and a college? A two-year college and a four-year college?
- What are the benefits to students of two-year/four-year articulation?
- What process is typically used to establish articulation agreements?
- Can traditional academic courses like English and math be articulated?
- Why use a term like "Technical Advanced Placement" instead of "articulation"?

In addition, suggestions for developing an articulation program will be included.

Section I. The PACE Technical Advanced Placement (TAP) Program

The PACE TAP program has been in place since 1989. Currently, 49 courses in 15 departments at Tri-County Technical College are available, through articulation agreements between the college and local high schools, for students to exempt. In all cases, students must have completed, with a grade of C or better, an equivalent course or courses in high school. In addition, they must submit a competency checklist signed by their high school teacher that verifies the competencies they have completed successfully. In most cases, students must also take a written test or participate in a performance-based test in order for College faculty to validate the exemption credit that will be awarded. Sample articulation agreements are contained in Appendix A.

Articulation agreements are updated by consortium-wide committees periodically or as needed. Committees also convene to consider forming new agreements at the request of schools or school districts. Training in TAP procedures for teachers and counselors is done as requested by PACE staff and Tri-County Technical College personnel. In addition, College staff are trained in new procedures as necessary.

TAP Student Handbooks and procedure packets are mailed every winter to high schools and school district offices. On-site TAP testing is also

offered to school districts by Tri-County staff. Appendix B includes the introductory section of the TAP Student Handbook.

Questions and Answers about Articulation

Why is an articulation program needed?

An articulation program between high schools and a community college eliminates overlaps between curricula in the various institutions. Because community colleges serve a wide range of "consumers," they typically offer entry level courses that are designed for adult students who have not had the benefit of vocational education courses or Tech Prep programs. In some cases, these course cover content similar to what is contained in vocational curricula on the secondary level. Articulation programs between high schools/career centers and community colleges allow students to receive credit for competencies already mastered. They benefit from these programs by receiving advanced placement into a community college program; they also do not have to repeat a course that they have already completed.

What role does articulation play in Tech Prep programs?

An articulation program like the PACE TAP program is an excellent incentive component of a local Tech Prep initiative. If promoted appropriately, it can encourage students to plan early for their associate degree studies by taking courses offered for articulation (exemption) credit. They can then take advantage of the opportunity to finish a college credential early, take a lighter course load in their first college term, or receive an additional credential.

In addition, many young Tech Prep consortia choose articulation as their first cooperative effort between secondary and postsecondary partners. Working together to create articulation agreements is an excellent way for these partners to find common ground and become better informed about each other's curricula. These cooperative efforts can often be the starting point for more sophisticated types of curriculum collaboration later.

What are the chief obstacles/controversies in this area?

Two basic controversies usually surface in negotiations between secondary and postsecondary partners for the purpose of designing articulation agreements. The first involves the problem of demonstrating

mutual respect. Negotiations will break down quickly unless both high school and community college faculty/staff believe that they are considered competent and their work is respected. If high school teachers, for example, believe that community college representatives are exhibiting a patronizing attitude, relationships will be tense at best.

The other possible obstacle to negotiating successful articulation agreements stems from the first one. High school faculty sometimes take umbrage at the notion that community college personnel must validate a student's competencies before awarding credit. This obstacle can easily be averted if community college personnel explain the need for validation because of accreditation requirements and to ensure that students' skills are current. Also, there is rarely a one-to-one relationship between high school/college courses. More often, students who complete two or more high school courses are able to demonstrate the required competencies to exempt one community college course.

In addition, community college faculty have some typical concerns about this process. The distinction needs to be made that community colleges involved in articulation programs are not awarding college credit for high school courses; they are awarding college credit to students who demonstrate competencies equivalent to college courses (similar to exemption processes available to all community college students). It is especially important to emphasize this distinction to community college faculty who may be offended by the notion that they are "teaching high school courses". College administrators may be reluctant at first to agree to a program that they see as possibly costing them money (as they are "giving away" credit to courses for which they could receive FTE funding). These fears can be allayed by discussing the benefits of attracting more students through the incentives of advanced placement. Tri-County Technical College's Advanced Technology Certificate program (a short-term locally designed certificate program comprising course combinations recommended by faculty, local business and industry representatives, and advisory committees) serves also to encourage students to stay beyond the associate degree and complete an additional credential.

Who should participate in an articulation program?

This question should be answered on two levels; organizational and individual.

Organizationally, articulation agreements can most easily be designed on the consortium level. A community college attempting to design

different agreements with several different high schools will be overwhelmed by paper work and the complexity of the effort. With consortium-wide committees, however, differences between high schools can be allowed for.

Individually, students who should participate in articulation programs are those who are motivated to take advantage of the opportunity offered. Tech Prep and Youth Apprenticeship students are good candidates because they will be entering postsecondary programs that usually offer many opportunities for articulated credit.

How should articulated credit be granted and used?

This is a decision that must ultimately be made by the postsecondary institution granting the articulated credit. In the PACE TAP program, TAP credit is granted by the appropriate department at Tri-County Technical College after all validation procedures have been successfully completed. The credit is transcripted as Technical Advanced Placement credit (see Appendix C) and is awarded in the same way as exemption credit. (The primary difference is that students in the PACE consortium pay no fees to participate in the TAP program; on the other hand, exemption students are generally charged a fee to be able to take an exemption test and get credit. They must also "make a case" to the appropriate department head in order to be able to initiate the exemption process.) Some classes that are available for TAP credit are required courses in the participating college programs; others are available as elective credit.

CAUTION: Unless you are planning to institute a 2+2+2 program with a four-year institution, make clear to students that their articulated credit can be used **only** at the community college that is granting it–the credit may not transfer elsewhere.

What is actually involved in an articulation agreement between a high school and a community college?

The major parts of an articulation agreement are the following:

- A statement that the participating community college agrees to grant college course credit for competencies successfully demonstrated in a high school course(s) and validated by college faculty;

- A statement indicating which secondary institutions are

participating in the articulation program (since not all high schools will offer all courses on which TAP agreements are based);

- A description of the process that must be completed in order for a student to earn articulated credit;
- A review/approval statement by the appropriate school district and college officials.

Other information that would be helpful includes information on the career opportunities for the college program that is granting the credit as well as information on the curriculum that a student will take after receiving articulated credit.

What process is typically used to establish articulation agreements?

Generally, articulation agreements are best negotiated by a committee that comprises both secondary and postsecondary teachers in the appropriate subject area. The process used then involves

- examining syllabi/course descriptions of both secondary and postsecondary courses to establish that a "match" exists;
- agreeing on validation procedures (e.g. competency checklist, teacher sign-off, exam, performance-based test);
- discussing how credit will be awarded and transcripted;
- planning ways to promote opportunities to students;
- planning workshops/in-service activities to train teachers and counselors (both secondary and postsecondary) in articulation processes;
- agreeing on a regular schedule (annually, biannually, etc.) to revise and update agreements.

Can traditional academic courses like English and math be articulated?

Yes--those articulation agreements are designed in the same way that

others are designed. Again, because community colleges often teach entry level courses that teach competencies equivalent to those that students may master in high school courses, the opportunity to TAP out of those courses can be offered. **However, special caution should be taken with academic courses that could transfer into a program at a senior college**. Students should be cautioned that the four-year college may or may not accept articulated credit for an academic course, especially if it is a prerequisite for an upper level course or if it is a required course for a major. Students who plan to enter a four-year program should be advised, then, not to count on transferring articulated credit.

Why use a term like "Technical Advanced Placement" instead of "articulation"?

Educators are generally familiar with the concept of "articulation," and the term is familiar to them. However, students and parents are not familiar with either the term or the concept. For marketing and promotional purposes, a term like "Technical Advanced Placement," which can be abbreviated to "TAP," is less cumbersome and more easily recognized. In the case of "TAP," the term was also chosen to convey the message to students that this credit is similar to AP credit, a concept with which they are already familiar.

Section II. A Model for 2 + 2 + 2 Articulation.

In 1992, Tri-County Technical College began negotiating an agreement that would allow two benefits to students:

1. Students who entered some of Tri-County's occupational associate degree programs with TAP credit would have new opportunities to transfer credits into selected bachelor's degree programs within one department at Clemson University, and

2. Clemson would accept the TAP credit that had been awarded by Tri-County for students who met all other requirements to be able to transfer these credits.

The agreement (Appendix D) is the starting point of a program that is

intended to serve as a model for other programs at Clemson and for other colleges and universities in South Carolina.

Questions and Answers about 2 + 2 + 2 Articulation

How does a 2 + 2 + 2 articulation program fit into a Tech Prep initiative?

Articulating occupational associate degree programs involving TAP credit provides opportunities for students who wish to go on to a four-year degree to do so with a minimum of lost time and inconvenience. In addition, this type of agreement goes a long way toward dispelling the myth that Tech Prep is a "dead end" or "tracking" program that keeps students from going on to a four-year college.

What are the benefits to students?

Chiefly, the benefits involve time, money and opportunity. Students can transfer into a four-year degree program with a minimum of lost time, and they won't be required to pay to take courses for which they have already met the requirements. In addition, students have the opportunity, once they have successfully completed a two-year college degree, to continue their education if they wish.

What are the chief obstacles/controversies in this area?

An atmosphere of mutual respect, once established, will go a long way toward resolving any potential problems. Although two-year and four-year institutions may have different educational missions and roles in the community, they share a great deal of common ground as well.

Major problems may arise in the negotiating process as a result of different practices in transcripting exemption credit. For example, Tri-County Technical College and Clemson University had to resolve what was essentially a difference in nomenclature. What one institution was calling "waiver" credit, the other called "exemption," but they were using the terms synonymously. These types of problems can be addressed by some flexibility on the part of registrars involved in the process.

What is involved in the actual agreement?

The process used to establish the agreement is much the same as those used in negotiating agreements between high schools and community colleges. The agreements themselves are also similar. What needs to be made clear is

- Which courses can be transferred from the two-year college;
- What exemption (articulated) credit will be accepted;
- What kind of credit will be awarded;
- What process must be completed for the credit to be awarded;
- How many credit hours and courses will still need to be completed;
- What degree will be awarded;
- Who the contact person(s) is/are for completing the process.

One major difference in articulation processes between high schools and community colleges and 2+2+2 agreements is that there is no additional validation process used between community colleges and four-year institutions. Additional validation of credit is not necessary because 1) validation of competency for articulated credit has already taken place in the original articulation process, and 2) courses accepted by the four-year institution for transfer have generally already been scrutinized extensively by faculty from the senior institution who sit on advisory committees for two-year occupational degree programs. If you would like more information on the 2 + 2 + 2 agreement between Tri-County Technical College and Clemson University, contact one of the following people:

Dr. Clint Isbell, Associate Professor
Department of Industrial Education
Clemson University
G-01 Tillman Hall
Clemson, SC 29634-0711
(803) 656-3447

Diana Walter
Executive Director
PACE
P.O. Box 587
Pendleton, SC 29670
(803) 646-8361

Dr. Jerry Lovedahl, Professor
Department of Industrial Education
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G-01 Tillman Hall
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Dr. Candace Gosnell
Instructional Development Coordinator
Tri-County Technical College
P.O. Box 587
Pendleton, SC 29670
(803) 646-8361

Tips for Designing a Successful Articulation Program--High School/Community College or 2+2+2

1. Consider forming articulation committees that represent all high schools in the consortium. Consortium-wide agreements are easier to administer, and the process provides excellent opportunities for secondary/postsecondary communication and collaboration.

2. Training teachers and counselors is one critical key to a successful program. Teachers can use the program as an incentive for students if they know about the opportunities available. It is also critical for teachers to understand the requirements for articulated credit so that they recommend only students who are likely to be successful. Counselors need to understand that an articulation program can be an excellent incentive for students to set goals for postsecondary study early in high school.

3. Another critical key to the success of an articulation program is promotion to students. Consider using a poster, brochure or handbook that will anticipate students' questions and concerns. The more you do to "get the word out" to students, the more likely it is that your program will be successful.

4. The postsecondary partner needs to "take ownership" of the articulation program. In other words, since the community college will actually be the institution granting credit, it needs to identify someone who is responsible for training teachers and counselors, designing and distributing promotional materials, distributing the necessary paperwork for articulation procedures, and tracking credit that has been awarded. The same person also needs to pursue 2+2+2 articulation agreements and needs to facilitate training at the community college to keep

faculty/staff and students informed of the opportunities available. Appendix E includes a portion of the PACE TAP Handbook for community college faculty and staff.

5. All partners should receive regular reports on credit that has been awarded and on any problems that have been encountered with the system. This type of reporting allows for appropriate revisions of agreements that may be problematic. In addition, students need to be monitored in to ensure that they are able to be successful in the next course they take after receiving credit. If it becomes clear that students are not successfully completing higher level courses, then a problem exists with the agreement.

6. Negotiating a 2+2+2 agreement can be extremely time-consuming because it requires partners to work their way through various levels of faculty, staff and administration in two postsecondary institutions. A way to begin the process and get an agreement in place more quickly may be to request that a four-year college or university use a student's articulated credit (high school-community college) as a basis to allow him/her to initiate that institution's course exemption process.

Appendix A
Sample PACE Articulation Agreement

PRACTICAL NURSING

PROGRAM DESCRIPTION: As a student in Practical Nursing (PN), you will study human anatomy, legal and ethical aspects of nursing and nursing process.

As a PN graduate, you will work under the direction of registered nurses, doctors or dentists to perform a variety of duties.

IF YOU'VE COMPLETED OR ARE NOW TAKING THESE HIGH SCHOOL COURSES:

Health Occupations I and II

YOU CAN EARN TAP CREDIT FOR THESE TCTC COURSES:

Up to 30 hours of clinical lab competencies for PNR 110 Fundamentals of Nursing.

WHEN YOU COMPLETE THESE PROCEDURES:

1. Have a written recommendation sent from your teacher that verifies the competencies in which you are proficient.

2. Demonstrate competency in selected clinical skills.

WHAT YOU WILL STUDY AT TCTC AFTER EARNING TAP CREDIT:

GENERAL EDUCATION:

MAT 150	Contemporary Mathematics
PSY 103	Human Relations
ENG 155	Communications I
BIO 110	General Anatomy and Physiology

MAJOR COURSES:

PNR 112	Nutrition
PNR 110	Fundamentals of Nursing
PNR 120	Medical-Surgical Nursing I
PNR 130	Medical-Surgical Nursing II
PNR 140	Medical-Surgical Nursing III
PNR 122	Pharmacology
PNR 170	Nursing the Older Adult
PNR 150	Maternal-Infant Nursing
PNR 160	Nursing of Children
PNR 183	Special Topics

DEGREE/MAJOR: Diploma in Health Science

FOR MORE INFORMATION: Contact Ms. Lynn Lollis, Department Head, Practical Nursing, at 261-1160.

ELECTRONICS ENGINEERING TECHNOLOGY

PROGRAM DESCRIPTION: As a student in Electronics Engineering Technology (EET), you would:

- study electrical, mechanical, and computer-controlled systems in manufacturing and methods of installing and troubleshooting these systems.
- receive hands-on experience with fabricating and troubleshooting circuits, standard testing instrumentation, solid state devices, integrated circuits, and digital systems such as computers.
- learn principles of circuit and component behavior and applications of modern electronic equipment.

As an EET graduate, you would be well qualified for such entry-level positions as electronics technician, engineering technician and research technician, among others!

IF YOU'VE COMPLETED OR ARE NOW TAKING THESE HIGH SCHOOL COURSES:

Electricity/(Computer)Electronics I AND Electricity/(Computer)Electronics II

YOU CAN EARN TAP CREDIT FOR THESE TCTC COURSES:

DC Circuits (EET 111)
AC Circuits (EET 112)

WHEN YOU COMPLETE THESE PROCEDURES:

1. Have a written recommendation from your vocational/career center teacher sent to the EET department head.
2. Place into Algebra and Trigonometry I (MAT 175) with a passing score on the TCTC placement test.
3. Pass a TAP exam with a grade of 70 or better.

WHAT YOU WILL STUDY AT TCTC AFTER EARNING TAP CREDIT*:

FALL (1st Year):
Communications I
Algebra and Trig. I
Intro. to Engineering Technology
Integrated Science

SPRING (1st Year):
Communications II
Algebra and Trig. II
Engineering Programming
Physics I

* Assumes maximum credit earned for TCTC courses listed above.

SUMMER (1st Year):
Calculus
Active Devices
Digital Circuits

FALL (2nd Year):
Electronics Circuits
Digital Integrated Circuits
Microprocessor Fundamentals
Social/Behavioral Science Elective

SPRING (2nd Year):
Analog Integrated Circuits
Industrial Electronics
Microprocessors
Circuit Assembly Technology
Elective

SUMMER (2nd Year):
Elective Senior Project
Advanced Microprocessors
Elective

DEGREE/MAJOR: Associate Degree in Engineering Technology/Electronics Engineering Technology.

FOR MORE INFORMATION:

Contact Mr. Ron Talley, Department Head, Electronics Engineering Technology, 646-8361, ext. 2278. (Toll-free numbers are listed on the front cover of this booklet.)

MACHINE TOOL TECHNOLOGY

PROGRAM DESCRIPTION: As a student in Machine Tool Technology (MTT), you would:

- study operation of metal-working equipment, principles of tool and die making, and basics of computer numerical control (CNC) and computer-aided manufacturing (CAM) systems.
- receive hands-on experience with hand and power tools, milling machines, lathes, grinders, drill presses, and sophisticated computer numerical control (CNC) equipment used to shape metal into precision parts.
- learn the principles for building tools, dies, jigs, fixtures, gauges, and intricate mechanisms; and application of metallurgy and heat treatment.

As an MTT graduate, you would be well qualified for such entry-level positions as computer numerical control operator, tool and die apprentice, and machinist, among others!

IF YOU'VE COMPLETED OR ARE NOW TAKING THESE HIGH SCHOOL COURSES:

Machine Shop/Tool Operations I AND Machine Shop/Tool Operations II

YOU CAN EARN TAP CREDIT FOR THESE TCTC COURSES:

Machine Shop Theory I	(MTT 121)
Machine Shop Practice I	(MTT 122)
Machine Shop Theory II	(MTT 123)
Machine Shop Practice II	(MTT 124)
Machine Shop Theory III	(MTT 125)
Machine Shop Practice III	(MTT 126)
Machine Tool Math Applications	(MTT 105)
Introduction to Computer Environment	(EGR 110)

WHEN YOU COMPLETE THESE PROCEDURES:

1. Have a written recommendation from your vocational/career center teacher submitted to the MTT department head.
2. Successfully complete Tool and Diemaking Practice I (MTT 222) at TCTC.

OR

3. Pass a TAP exam with a grade of 70 or better.

WHAT YOU WILL STUDY AT TCTC AFTER EARNING TAP CREDIT:*

FALL (1st Year):
Die Theory
Tool and Die Practice I
Machine Tool Math Appl.
Intro. To Comp. Environ.

SPRING (1st Year):
Tool Design
Tool and Die Theory II
Print Reading and Sketching
Algebra, Geo. and Trig. I

SUMMER (1st Year):
Metals and Heat Treatment
Principles of CNC
Geometric Tolerancing

FALL (2nd Year):
CNC Operations
Algebra, Geo. and Trig. II
Communications I
General Elective
(Optional Elective:
Additional Courses for
Advanced Technology
Certificate in CAD/CAM)

SPRING (2nd Year):
Communications II
Humanities Elective
Social/Behavioral Science
General Elective
(Optional Elective: Additional
Courses for Advanced Technology Certificate
in CAD/CAM)

ELECTIVES FOR ADVANCED TECHNOLOGY CERTIFICATE IN CAD/CAM:
Introduction to CAD
CNC Programming I
CNC Programming and Operations
CNC Programming I
Machine Tool CAM

*Assumes maximum credit earned for TCTC courses listed above.

DEGREE/MAJOR: Associate Degree in Industrial Technology/Machine Tool Technology.

FOR MORE INFORMATION:

Contact Mr. Curt McKinney, Department Head, Machine Tool Technology, 646-8361, ext. 2272. (Toll-free numbers are listed on the front cover of this booklet.)

Appendix B
Introductory Section of the PACE Student TAP Handbook

Tech Prep and Technical Advanced Placement

Tech Prep. Tech Prep is a new program designed to PREPare students for careers in TECHnologies. Tech Prep programs are being developed in Anderson, Oconee, and Pickens County schools in association with the Partnership for Academic and Career Education (PACE), a business and education consortium involving the seven area school districts, local businesses and industries, the National Dropout Prevention Center, Clemson University's College of Education, Tri-County Technical College, The Career and Technology Center and the Anderson County Business and Education Partnership.

Tech Prep involves specific high school and two-year college courses which provide the background and training for rewarding careers in mid-level technologies--careers in industrial/engineering technology, business, health, and public service technologies. Mid-level technology careers typically require some high school vocational training up to an occupational Associate Degree either to enter the job market or to qualify for advancement.

Tech Prep involves

- taking specially designed, or enhanced, high school courses in math, English, and science (such as "Physics for the Technologies", an applied physics course now available in most schools) that provide the skills needed for two-year college occupational degree programs. These unique courses not only teach important math, English, and science skills but show how they are used in various careers.

- selecting and taking vocational or occupational courses in high school that provide important background information and skills for two-year college programs in related majors.

- providing qualified students with the opportunity to earn Tri-County Technical College (TCTC) credit through Technical Advanced Placement (TAP).

- providing students with a greater understanding of technology careers and the skills needed to be successful in today's demanding and competitive work place.

Several components of the Tech Prep program are available now in most area high schools. Over the next few years, the entire Tech Prep program will be available to all high school students in Anderson, Oconee, and Pickens counties.

Many other states also offer Tech Prep, or "2 + 2", programs linking high school and community college courses. In fact, Tech Prep programs are now being developed all across South Carolina and the nation.

Technical Advanced Placement. Technical Advanced Placement (TAP) is a special part of the Tech Prep program which enables qualified high school students to earn Tri-County Technical College credit.

The purpose of TAP is to

- reduce overlapping between high school and College programs;
- enable students who do well in high school courses to save time, money, and/or to carry lighter course loads in their first term of studies at Tri-County Technical College.

The procedures students follow to earn TAP credit are developed by teams of high school and Tri-County Technical College faculty using a process called "articulation." All TAP procedures are fully approved by administrators of Anderson, Oconee, and Pickens County school districts and Tri-County Technical College.

Appendix C
Sample Transcript with TAP Credit

NAME [redacted]
STUDENT NUMBER [redacted] BIRTH [redacted]

Tri-County Technical College
PENDLETON, SOUTH CAROLINA

COURSE NUMBER	COURSE TITLE	GRADE	CREDIT HOURS	QUALITY POINTS	COURSE NUMBER	COURSE TITLE	GRADE	CREDIT HOURS	QUALITY POINTS

Tech Ed Academic Record

Secondary Schools:
TAMASSEE-SALEM HIGH SCHOOL — Grad Date 06/92
FRED P. HAMILTON CAREER CENTER — 09/90 - 06/92

Program:
INDUSTRIAL & ENGINEERING TECHNOLOGY
ASSOCIATE IN INDUSTRIAL TECH
Major: MACHINE TOOL TECHNOLOGY

Exempt Credit Applied to 1992 Fall Semester
TECHNICAL ADVANCED PLACEMENT

MACHINE TOOL THEORY I	3.0
MACHINE TOOL PRACTICE I	4.0
MACHINE TOOL THEORY II	3.0
MACHINE TOOL PRACTICE II	4.0
MACHINE TOOL THEORY III	3.0
MACHINE TOOL PRAC III	4.0
Transfer/Exempt Credit Total	21.0

****
1992 Fall Semester (08/24/92 - 12/18/92)
****

Admitted Program:
INDUSTRIAL & ENGINEERING TECHNOLOGY
ASSOCIATE IN INDUSTRIAL TECH
Major: MACHINE TOOL TECHNOLOGY

MTT -222	TOOL & DIEMAKING PRAC I	C	4.0	8.0
MTT -105	MACHINE TOOL MATH APPLIC	A	3.0	12.0
MTT -211	DIE THEORY	B	3.0	9.0
EGT -104	PRINT READING	A	3.0	12.0

	AHRS	EHRS	QHRS	QPTS	GPA
Current	13.00	13.00	13.00	41.00	3.154
Cumulative	13.00	34.00	13.00	41.00	3.154

** End of Tech Ed Record **

KEY
R REPEATING COURSE
* COURSE NOT APPLIED TO CURRENT PROGRAM
** INCLUDES INITIAL STATISTICS

Lorraine C. Frith
OFFICIAL SIGNATURE

Federal law prohibits access to this record by any party without written consent of the student.

PAGE 1 OF 1
04/16/93
Official
Academic Record

Official transcripts bear signature stamp embossed with university seal.

Appendix D
2 + 2 + 2 Model

ARTICULATION AGREEMENT

PROGRAM AREAS: Electronics Engineering Technology
Engineering Graphics Technology
General Engineering Technology
Industrial Electronics Technology
Machine Tool Technology

AGREEMENT BETWEEN: Tri-County Technical College, Pendleton, SC and the Industrial Education Department, Clemson University, Clemson, SC

Date: September 16, 1994

Students completing the Associate in Engineering Technology degree in Engineering Graphics Technology, Electronics Engineering Technology, or General Engineering Technology and students completing the Associate in Industrial Technology degree in Industrial Electronics Technology or Machine Tool Technology with a GPR of 2.5 or better may apply for transfer admission to Clemson University in the Industrial Education Department as majors in the Vocational-Technical Education option.

To enter as upper division students, lower division general education requirements should be satisfied by successful completion of identified university transfer courses as substitution for the general education courses required in the Tri-County Technical College curricula.

No course may be transferred to Clemson University from Tri-County Technical College as a substitute for any 300-400 level course.

A grade of C or higher is required for the transfer of any course. Therefore, Clemson University will consider for transfer from Tri-County Technical College any course shown on the official transcript where credit is recorded and certified as having been met at a level of "C" or higher. Quality points from transfer courses will not be considered in the calculation of the grade point ratio (GPR) at Clemson.

The Vocational-Technical Education degree option at Clemson University allows for the transfer of up to 30 hours of credit to satisfy the technical specialty requirement. Courses transferred to meet the technical specialty requirement are not transferred in lieu of any specific Clemson courses, and must be from a SACS approved Associate degree or higher. All of the courses in the 30 hour block must be related to <u>one</u> area.

Upon admission, an appointment with the Department Head in Industrial Education will culminate in:

(a) the appointment of advisor in area of specialization,
(b) a program of needed courses leading to a Bachelor of Science degree in the Vocational - Technical Education option of Industrial Education,
(c) and no repetition of courses credited from Tri-County Technical College which meet the guidelines stated above.

Key faculty and administrators shall review this agreement on a regular basis.

Department Head, Ind. Ed. Dept., Clemson Univ.

Chairman, Indust. & Engineering Technology, Tri-County Technical College

Dean, College of Education, Clemson University

Dean of Instruction, Tri-County Technical Col.

Senior Vice Provost, Clemson University

President, Tri-County Technical College

Provost, Clemson University

BEST COPY AVAILABLE

TECH PREP ARTICULATION MODEL

Effective September, 1994

Tri-County Technical College
Electronics Engineering Tech

Clemson University, Dept. of Ind. Ed.
Vocational-TechnicalEducation

Technical Advanced Placement Credit (TAP)
Tri-County Technical College certifies that these course requirements have been met at a "C" or higher level.

	Equivalent TCTC Courses		Required Clemson Courses	
	ENG 101 Eng. Composition I	(3)*	Eng. 101 Composition I	(3)
	ENG 102 Eng. Compositon II	(3)*	Eng. 102 Composition II	(3)
	ENG 201,202,205,206, 208, or 209	(3)**	Lit. Req. see #3	(3)
	PHY 201 Physics I	(4)*	Science Req. see # 1	(4)
	PHY 202 Physics II	(4)*	Science Req. see # 1	(4)
	EET 231 Ind. Elect. (for InEd.208) or CHM 110 or AST 101	(4)*	Science Req. see #1	(4)
	MAT 110	(3)*	Math Req. see # 1	(3)
	MAT 111	(3)*	Math Req. see # 1	(3)
	SOC 101 Intro. to Sociology	(3)*	Soc. Sci. Req. see # 1	(3)
	SOC 205 Social Problems	(3)**	Soc. Sci. Req. see # 1	(3)
	SPC 205 Public Speaking	(3)*	Speech 250 see #1	(3)
	HSS xxx Humanities Elective	(3)*	Humanities Req. see #1	(3)
	EGR 101 Intro to Engr. Tech.	(1)*	Tech Speciality Req. see # 4	(1)
	EGR 112 Engr. Programming	(3)*	Tech Speciality Req. see # 4	(3)
T A P.....	EET 111 DC Circuits	(4)*	Tech Speciality Req. see # 4	(4)
T A P.....	EET 112 AC Circuits	(4)*	Tech Speciality Req. see # 4	(4)
	EET 131 Active Devices	(4)*	Tech Speciality Req. see # 4	(4)
	EET 141 Electronic Circuits	(4)*	Tech Speciality Req. see #4	(4)
	EET 145 Digital Circuits	(4)*	Tech Speciality Req. see #4	(4)
	EET 210 Digital Integ. Cir.	(4)*	Tech Speciality Req. see #4	(4)
	EET 271 Cir. Assem. Tech.	(4)*	Tech Speciality Req. see #4	(4)
	EET 220 Analog Integrat. Cir.	(3)*	Major Req. see # 2	(3)

EET 251 Micro Fundamentals	(4)*	Elective	see # 5	(4)
EET 253 Microprocessors	(4)*	Elective	see # 5	(4)
EET 255 Adv. Microproc.	(3)*	Elective	see # 5	(3)
EET 273 Elect. Sen. Proj.	(1)*	Elective	see # 5	(1)

* TCTC Associate Degree Requirements
** TCTC Program Electives
# 1 See General Education Requirements
# 2 Major Requirement must be approved by advisor
# 3 To be selected from the following: Eng. 202, 203, 204, 205, 206 207, 208, or 209
# 4 Technical Speciality Requirements must relate to one of the Trades and Industries programs recognized by the South Carolina Department of Education. A minimum of 30 credits is required.See adviser for list of approved specialities and list of courses available to meet the Technical Speciality Requirement.
# 5 Elective - Applicable to any approved credit course.

Following completion of the Associate in Engineering Technology Degree (with a major in Electronics Engineering Technology) from Tri -County Technical College, it is feasible that upon acceptance into the Vocational-Technical Education at Clemson University, the student would be able to complete the baccalaureate degree program with a remaining 49 credit hours. These hours would include the following:

18 credit hours of Trade & Industry Professional Education Courses
3 credit hours of Computer Applications (InEd. 480)
3 credit hours of History & Philosophy (InEd. 422)
12 credit hours of Industrial Cooperative Exp. (InEd. 350 & InEd. 450)
12 credit hours of Internship (InEd. 433 & InEd.434)
1 credit hour of Elective

TECH PREP ARTICULATION MODEL

Effective September, 1994

Tri-County Technical College
Engineering Graphics Technology

Clemson University, Dept. of Ind. Ed.
Vocational-Technical Education

Technical Advanced Placement Courses (TAP)
Tri-County Technical College certifies that these course requirements have been met at a "C" or higher level.

	Equivalent TCTC Courses		Required Clemson Courses	
	ENG 101 Eng. Composition I	(3)*	Eng. 101 Composition I	(3)
	ENG 102 Eng. Compositon II	(3)*	Eng. 102 Composition II	(3)
	ENG 201,202,205,206, 208, or 209	3)**	Lit. Req. see #3	(3)
	PHY 201 Physics I	(4)*	Science Req. see # 1	(4)
	PHY 202 Physics II	(4)*	Science Req. see # 1	(4)
	EET 231 Ind. Elect. (for InEd.208) or CHM110 or AST101	(4)	Science Req. see # 1	(4)
	MAT 110	(3)*	Math Req. see # 1	(3)
	MAT 111	(3)*	Math Req. see # 1	(3)
	SOC 101 Intro. to Sociology	(3)*	Soc. Sci. Req. see # 1	(3)
	SOC 205 Social Problems	(3)**	Soc. Sci. Req. see # 1	(3)
	SPC 205 Public Speaking	(3)*	Speech 250 see #1	(3)
	HSS xxx Humanities Elective	(3)*	Humanities Req.see #1	(3)
	EGR 120 Eng. Comp. App.	(3)*	Tech Speciality Req. see # 4	(3)
	EGR 194 Statics & Strength of Materials	(4)*	Tech Speciality Req. see # 4	(4)
T A P	EGT 110 Eng. Graphics I	(4)*	Tech Speciality Req. see # 4	(4)
	EGT 115 Eng. Graphics II	(4)*	Tech Speciality Req. see # 4	(4)
	EGT 120 Geometric Tol.	(2)*	Tech Speciality Req. see # 4	(2)
	EGT 151 Intro. to CAD	(3)*	Tech Speciality Req. see # 4	(3)
	EGT 165 Intro. to CAD/CAM	(2)*	Tech Speciality Req. see # 4	(2)

EGT 210 Eng. Graphics III	(4)*	Tech Speciality Req.	see # 4	(4)
EGT 215 Mech. Draw. App.	(4)*	Tech Speciality Req.	see # 4	(4)
EGT 252 Advanced CAD	(3)***	Major Requirement	see #2	(3)
EGR 175 Mfg. Processes (3)or CIM 131 Comp. Integ. Mfg.	(3)*	Major Requirement	see #2	(3)
EGT 155 Intermed. CAD	(2)*	Elective	see # 5	(2)
EGT 250 CAD Applications	(2)*	Elective	see # 5	(2)
MTT 101 Intro. to Mach. T.	(2)*	Elective	see # 5	(2)

* TCTC Associate Degree Requirements
** Electives in the TCTC Engineering Graphics Technology Curriculum
*** Major Course Elective in the TCTC Curriculum
# 1 See General Education Requirements.
# 2 Major Requirement must be approved by advisor.
# 3 To be selected from the following: Eng. 202, 203, 204, 205, 206 207, 208, or 209
# 4 Technical Speciality Requirements must relate to one of the Trades and Industries programs recognized by the South Carolina Department of Education. A minimum of 30 credits is required.See adviser for list of approved specialities and list of courses available to meet the Technical Speciality Requirement.
# 5 Elective - Applicable to any approved credit course.

Following completion of the Associate in Engineering Technology Degree (with a major in Engineering Graphics Technology) from Tri -County Technical College, it is feasible that upon acceptance into the Vocational-Technical Education at Clemson University, the student would be able to complete the baccalaureate degree program with a remaining 52 credit hours. These hours would include the following:

18 credit hours of Trade & Industry Professional Education Courses
3 credit hours of Computer Applications (InEd. 480)
3 credit hours of History & Philosophy (InEd. 422)
12 credit hours of Industrial Cooperative Exp. (InEd. 350 & InEd. 450)
12 credit hours of Internship (InEd. 433 & InEd.434)
4 credit hours of Electives

TECH PREP ARTICULATION MODEL

Effective September, 1994

Technical Advanced Placement Credit (TAP)
Tri-County Technical College certifies that these course requirements have been met at a "C" or higher level.

	Tri-County Technical College General Engineering Tech.		Clemson University,Dept. of Ind. Ed. Vocational-Technical Education	
	Equivalent TCTC Courses		**Required Clemson Courses**	
	ENG 101 Eng. Comp. I	(3)*	Eng. 101 Composition I	(3)
	ENG 102 Eng. Comp. II	(3)*	Eng. 102 Composition II	(3)
	ENG 201,202,205,206, 208, or 209	(3)**	Lit. Req. see #3	(3)
	PHY 201 Physics I	(4)*	Science Req. see # 1	(4)
	PHY 202 Physics II	(4)	Science Req. see # 1	(4)
	EET 231 Ind. Elect. (for InEd.208) or CHM 110 or AST 101	(4)*	Science Req. see # 1	(4)
	MAT 110	(3)*	Math Req. see # 1	(3)
	MAT 111	(3)*	Math Req. see # 1	(3)
	SOC 101 Intro. to Sociology	(3)*	Soc. Sci. Req. see # 1	(3)
	SOC 205 Social Problems	(3)**	Soc. Sci. Req. see # 1	(3)
	SPC 205 Public Speaking	(3)*	Speech 250 see #1	(3)
	HSS xxx Humanities Elective	(3)*	Humanities Req.see #1	(3)
	EGR 120 Engr. Comp. Appli.	(3)*	Tech Speciality Req. see # 4	(3)
	EGR 175 Manufact. Proc. or CIM 131 Comp. Integ. Mfg.	(3)*	Tech Speciality Req. see # 4	(3)
	EGR 194 Stat. & Strength	(4)*	Tech Speciality Req. see # 4	(4)
TAP.....	ELT 111 DC/AC Circuits	(4)*	Tech Speciality Req. see # 4	(4)
T A P	EEM 131 Solid-State Devices	(4)*	Tech Speciality Req. see # 4	(4)
	EEM 151 Motor Controls	(4)*	Tech Speciality Req. see #4	(4)
	EEM 231 Digital I	(3)*	Tech Speciality Req. see # 4	(3)
	EEM 232 Digital II	(3)*	Tech Speciality Req. see # 4	(3)

				2
AMT 102 Comp. Cont. Mach.	(4)*	Tech Speciality Req. see # 4 and 2 hrs. toward electives		(2)
MET 224 Hydr. and Pneum.	(3)*	Major Req.	see # 2	(3)
AMT 103 Sensors	(3)*	Elective	see # 5	(3)
AMT 104 Auto.Work Cell Design	(4)*	Elective	see # 5	(4)
AMT 201 Failure Analysis	(4)*	Elective	see # 5	(4)

* TCTC Associate Degree Requirements
** TCTC Program Electives
# 1 See General Education Requirements
# 2 Major Requirement must be approved by advisor
# 3 To be selected from the following: Eng. 202, 203, 204, 205, 206 207, 208, or 209
# 4 Technical Speciality Requirements must relate to one of the Trades and Industries programs recognized by the South Carolina Department of Education. A minimum of 30 credits is required.See adviser for list of approved specialities and list of courses available to meet the Technical Speciality Requirement.
# 5 Elective - Applicable to any approved credit course.

Following completion of the Associate in Engineering Technology Degree (with a major in General Engineering Technology) from Tri -County Technical College, it is feasible that upon acceptance into the Vocational-Technical Education at Clemson University, the student would be able to complete the baccalaureate degree program with a remaining 48 credit hours. These hours would include the following:

18 credit hours of Trade & Industry Professional Education Courses
3 credit hours of Computer Applications (InEd. 480)
3 credit hours of History & Philosophy (InEd. 422)
12 credit hours of Industrial Cooperative Exp. (InEd. 350 & InEd. 450))
12 credit hours of Internship (InEd. 433 & InEd. 434)

TECH PREP ARTICULATION MODEL

Effective September 1994

Tri-County Technical College
Industrial Electronics Technology

Clemson University, Dept. of Ind. Ed.
Vocational-Technical Education

Technical Advanced Placement Credit (TAP)
Tri-County Technical College certifies that these course requirements have been met at a "C" or higher level.

	Equivalent TCTC Courses		Required Clemson Courses	
	ENG 101 Eng. Comp. I	(3)*	Eng. 101 Composition I	(3)
	ENG 102 Eng. Comp. II	(3)*	Eng. 102 Composition II	(3)
	ENG 201,202,205,206, 208, or 209	(3)	Lit. Req. see #3	(3)
	PHY 201 Physics I	(4)*	Science Req. see # 1	(4)
	PHY 202 Physics II	(4)**	Science Req. see # 1	(4)
	EET 231 Ind. Elect.(for InEd.208) or CHM 110 or AST 101	(4)**	Science Req. see # 1	(4)
	MAT 110	(3)*	Math Req. see # 1	(3)
	MAT 111	(3)**	Math Req. see # 1	(3)
	SOC 101 Intro. to Sociology	(3)*	Soc. Sci. Req. see # 1	(3)
	SOC 205 Social Problems	(3)	Soc. Sci. Req. see # 1	(3)
	SPC 205 Public Speaking	(3)*	Speech 250 see #1	(3)
	HSS xxx Humanities Elect.	(3)*	Humanities Req.see #1	(3)
TAP	EEM 111 DC Analysis	(3)*	Tech Speciality Req. see # 4	(3)
TAP	EEM 112 AC Analysis	(3)*	Tech Speciality Req. see # 4	(3)
TAP	EEM 115 DC Circuits	(4)*	Tech Speciality Req. see # 4	(4)
TAP	EEM 116 AC Circuits	(4)*	Tech Speciality Req. see # 4	(4)
TAP	EEM 131 Solid State Devices	(4)*	Tech Speciality Req. see #4	(4)
	EEM 151 Motor Controls	(4)*	Tech Speciality Req. see # 4	(4)
	EEM 161 Indust. Instru.	(4)*	Tech Speciality Req. see # 4	(4)
	EEM 200 Semicond. Devices	(4)*	Tech Speciality Req. see # 4	(1)
	CIM 131 Comp. Integ. Mfg.	(3)*	Major Req. see # 2	(3)

EEM 217 AC/DC Mach./Code	(4)*	Elective.	see # 5	(4)
EEM 230 Digital Electronics	(3)*	Elective	see #5	(4)
EEM 240 Basic Microproc.	(4)*	Elective	see # 5	(4)
EEM 107 Ind Comp. Tech.	(2)*	Elective	see # 5	(2)

* TCTC Associate Degree Requirements
** Electives in the TCTC Industrial Electronics Curriculum
# 1 See General Education Requirements.
# 2 Major Requirement must be approved by advisor
# 3 To be selected from the following: Eng. 202, 203, 204, 205, 206 207, 208, or 209
# 4 Technical Speciality Requirements must relate to one of the Trades and Industries programs recognized by the South Carolina Department of Education. A minimum of 30 credits is required.See adviser for list of approved specialities and list of courses available to meet the Technical Speciality Requirement.
# 5 Elective - Applicable to any approved credit course.

Following completion of the Associate in Industrial Technology Degree (with a major in Industrial Electronics Technology) from Tri -County Technical College, it is feasible that upon acceptance into the Vocational-Technical Education at Clemson University, the student would be able to complete the baccalaureate degree program with a remaining 48 credit hours. These hours would include the following:

18 credit hours of Trade & Industry Professional Education Courses
3 credit hours of Computer Applications (InEd. 480)
3 credit hours of History & Philosophy (InEd. 422)
12 credit hours of Industrial Cooperative Exp. (InEd. 350 & InEd. 450)
12 credit hours of Internship (InEd. 433 & InEd.434)

TECH PREP ARTICULATION MODEL

Effective September, 1994

Tri-County Technical College
Machine Tool Technology

Clemson University, Dept. of Ind. Ed.
Vocational-Technical Education

Technical Advanced Placement Credit (TAP) Tri-County Technical College certifies that these course requirements have been met at a "C" or higher level.	Equivalent TCTC Courses		Required Clemson Courses	
	ENG 101 Eng. Comp. I	(3)*	Eng. 101 Composition I	(3)
	ENG 102 Eng. Comp. II	(3)*	Eng. 102 Composition II	(3)
	ENG 201,202,205,206, 208, or 209	(3)**	Lit. Req. see #3	(3)
	PHY 201 Physics I	(4)	Science Req. see # 1	(4)
	PHY 202 Physics II	(4)	Science Req. see # 1	(4)
TAP.....	MTT 121 Mach. Tool Theory I(for InEd.240)*	(3)	Science Req. see # 1	(3)
	MAT 110	(3)*	Math Req. see # 1	(3)
	MAT 111	(3)*	Math Req. see # 1	(3)
	SOC 101 Intro. to Sociology	(3)*	Soc. Sci. Req. see # 1	(3)
	SOC 205 Social Problems	(3)**	Soc. Sci. Req. see # 1	(3)
	SPC 205 Public Speaking	(3)*	Speech 250 see #1	(3)
	HSS xxx Humanities Elective	(3)*	Humanities Req.see #1	(3)
	EGT 120 Geometric Tol	(2)*	Tech Speciality Req. see # 4	(2)
TAP.....	MTT 122 Mach. Tool Prac. I	(4)*	Tech Speciality Req. see # 4	(4)
TAP.....	MTT 123 Mach. Tool Th. II	(3)*	Tech Speciality Req. see # 4	(3)
TAP.....	MTT 124 Mach. Tool Prac. II	(4)*	Tech Speciality Req. see # 4	(4)
TAP.....	MTT 125 Mach. Tool Th. III	(3)*	Tech Speciality Req. see # 4	(3)
TAP.....	MTT 126 Mach. Tool Prac. III	(4)*	Tech Speciality Req. see #4	(4)
TAP.....	MTT 105 Mach Tool Math Applications	(3)*	Tech Speciality Req. see # 4	(3)
	MTT 211 Die Theory	(3)*	Tech Speciality Req. see # 4	(3)
	MTT 212 Tool Design	(4)*	Tech Speciality Req. see # 4	(4)

TAP.....	EGR 110 Intro to Comp Environment	(3)*	Major Req.	see # 2	(3)
	MTT 222 Tool & Die Prac. I	(4)*	Elective	see # 5	(3)
	MTT 224 Tool & Die Prac. II	(4)*	Elective	see # 5	(3)
	MTT 250 Principles of CNC	(3)*	Elective	see # 5	(3)
	MTT 251 CNC Operations	(3)*	Elective	see # 5	(4)

* TCTC Associate Degree Requirements
** TCTC Program Electives
# 1 See General Education Requirements.
# 2 Major Requirement must be approved by advisor
# 3 To be selected from the following: Eng. 202, 203, 204, 205, 206 207, 208, or 209
# 4 Technical Speciality Requirements must relate to one of the Trades and Industries programs recognized by the South Carolina Department of Education. A minimum of 30 credits is required.See adviser for list of approved specialities and list of courses available to meet the Technical Speciality Requirement.
# 5 Elective - Applicable to any approved credit course.

Following completion of the Associate in Industrial Technology Degree (with a major in Machine Tool Technology) from Tri -County Technical College, it is feasible that upon acceptance into the Vocational-Technical Education at Clemson University, the student would be able to complete the baccalaureate degree program with a remaining 48 credit hours. These hours would include the following:

18 credit hours of Trade & Industry Professional Education Courses
3 credit hours of Computer Applications (InEd. 480)
3 credit hours of History & Philosophy (InEd. 422)
12 credit hours of Industrial Cooperative Exp. (InEd. 350 & InEd. 450)
12 credit hours of Internship (InEd. 433 & InEd.434)

Appendix E
Section from PACE TAP Handbook for Faculty/Staff

RESPONSIBILITIES OF DIVISION CHAIRS

Division chairs are closely involved in all aspects of articulation in their areas, including the development of TAP procedures. The division chairs are responsible to

1. Oversee the development, implementation, and evaluation of articulation agreements and TAP procedures in all appropriate depart ments within their divisions.

2. Assist department heads and articulation committees to have TAP agreements reviewed and approved by the dean of instruction and appropriate school district officials.

3. Provide the Tech Prep Coordinator with information on students who attempted to earn TAP credit but were not successful.

4. Apprise the Tech Prep Coordinator of factors associated with TAP that are not working satisfactorily and/or areas that need improvement.

RESPONSIBILITIES OF DEPARTMENT HEADS

Department heads play a key role in the success of Technical Advanced Placement. Some department heads are involved in developing and maintaining articulation agreements and awarding credit to qualified students. Others may not have any of their own courses articulated but will need to work with students who've received credit from other departments. Listed below are general responsibilities of department heads in the various areas of the articulation/TAP process.

All department heads

1. Ensure that advisors ask incoming students whether or not they've received any exemption credit and for which course(s). Be sure to verify what the student says about earned credit by asking to see a copy of the course transfer/exemption form or by calling Student Records. Remember that TAP only applies to recent high school graduates; "older" students may indicate that they've received exemption credit through evaluation of military experiences or other processes. (Remember that a student could have earned credit through another department that may apply

course(s). Be sure to verify what the student says about earned credit by asking to see a copy of the course transfer/exemption form or by calling Student Records. Remember that TAP only applies to recent high school graduates; "older" students may indicate that they've received exemption credit through evaluation of military experiences or other processes. (Remember that a student could have earned credit through another department that may apply to requirements in your program—CPT 170, ACC 101, etc.)

2. Remind advisors to check their "Advising Reports" for returning students. All exemption credit awarded will appear on the advising report. (If there are questions about whether or not a student has received TAP credit, call Student Records.)

Department Heads who award credit through TAP

1. Coordinate articulation committees, oversee development of effective TAP procedures.

2. Assist in the evaluation of TAP procedures (see section on evaluation, page 16).

3. Monitor progress of students who've applied for TAP (suggestion: keep a checklist of procedures and indicate dates that student completed each procedure)

4. Submit exemption forms to the Student Records Office for all students who've been awarded credit through the department (regardless of whether or not student has been admitted to TCTC) and keep a copy of the exemption form in the department records. (See example in APPENDIX A.)

5. Send a copy of the course transfer/exemption form to the student along with an information sheet (see APPENDIX C) that includes the following reminders:

- The credit will appear on his/her TCTC transcript at

the end of the first active semester;

- Only credit hours earned will show on the transcript (no grade) and that TAP credit will not affect GPA;

- The course(s) for which credit has been awarded can be used in one of two ways: 1) as a required course if that course is listed in the College catalog for his/her degree program; or 2) as an elective in an associate degree program with permission of his/her department head;

- The credit is good for one year from the date appearing on the course transfer/exemption form; once he/she enrolls, the credit then becomes part of the permanent record;

- The credit applies only to TCTC programs and that if the student plans to transfer to another college, he/she should not expect other institutions to accept TAP credit (other colleges have their own versions of TAP);

- IT IS THE STUDENT'S RESPONSIBILITY TO TELL HIS/HER ACADEMIC ADVISOR OF CREDIT EARNED THROUGH TAP WHEN REGISTERING FOR THE FIRST TERM AT TCTC. HE/SHE SHOULD BRING A COPY OF THE COURSE TRANSFER/EXEMPTION FORM TO REGISTRATION.

6. Administer, score TAP exams (if required in the department's TAP procedures)—see section below on "Suggested procedures for administering TAP exams."

7. Keep accurate records on students who've applied for TAP, taken exams, and received credit. (Try to get each student's full name and social security number!)

8. Submit lists to the division chairman of students who started but did not complete the process. (Students who

have been awarded credit will be tracked through the TAP computer program or through Student Records' files.)

The following sections include suggestions for department heads who are involved in administering Technical Advanced Placement exams.

Suggested Procedures For Administering TAP Exams. If an articulation committee chooses to use a TAP exam as part of the TAP procedures, the TCTC Department Head will need to keep in mind or do several things. (Note: TAP exams are always developed and administered by TCTC faculty unless otherwise approved by the division chairman and dean of instruction.)

1. Identify someone in the department who will coordinate the testing process (faculty member or department head).

2. Arrange date, time, and location of exam; obtain any necessary approvals for use of testing room if appropriate (e.g., Al Norris' approval for use of the Student Center). Note: Arrangements may be made to offer TAP exams through the Testing Center. Contact Nancy Patterson for more information.

3. Determine if students will be allowed to practice on TCTC equipment prior to test (e.g., typewriters for OST exams); provide all necessary information on when, where, contact person, and any "sign-up" procedures for using TCTC equipment (include this along with information provided in item 5).

4. Develop or review testing application form. (See sample from Business/Office Systems Technology in APPENDIX D.) Application items might include the following information.

- student's name, address, phone number, SSN, date of birth, school and/or career center, grade, teacher's name;

- release for student and parents to sign so TAP exam grade

can be given to the high school;

- reminder about procedures/paperwork that must be completed before taking exam (e.g., submission of high school teacher's recommendation, evidence that appropriate high school course(s) have been completed with necessary grade, etc.);

- reminder that a complete list of all TAP procedures is in the TAP booklets available from their counselor, teacher, or from TCTC;

- explanation that student will be notified if his/her application for testing is approved and he/she will also receive additional information about the test;

- the name(s) of the TAP exams on the application form and an item asking students what TCTC program they plan to apply to. (Because, for example, the student could be applying to take the ACC 101 exam but planning to enter Computer Technology.)

5. Send information packet to high schools/career center counselors and appropriate teachers (see sample in APPENDIX E). Information packet might include

- sheets describing all TAP procedures for the department. (These sheets could be taken directly from the TAP booklets published for students.);

- title of exam(s), date, time, location;

- information on how students should apply for testing;

- copies of test applications;

- name of TCTC person to contact if there are questions;

- information on any opportunities for students to practice on TCTC equipment (if appropriate).

6. Verify that students who plan to take the exam have completed TAP procedures prerequisite to taking the exam.

7. Determine which students will be approved for testing.

8. Notify students who've been approved for testing by sending either a postcard or a form letter (see APPENDIX F).
Notification card/letter should describe:

- date, time, location of test;
- campus map and parking;
- approximate time needed to complete test;
- materials students should bring with them (or statement that all supplies will be provided);
- fact that there is no charge for testing;
- requirement to bring photo identification in order to take exam (which can be used as a measure to ensure that students don't send someone else to take the exam for them);
- when test results should be available and how they will be notified.

9. Notify any students who applied to take the TAP exam but were not approved for testing; indicate why they were not approved to take the exam (e.g. did not complete TAP procedures that were prerequisite to taking the exam). See the example in APPENDIX F.

10. Notify appropriate people on campus (security, Admissions, Con't Ed, etc.) of date, time, location, and person in charge of testing (e.g., "ACC 101 TAP exam will be administered March 20 at 2:00 in the Student Center. Questions should be directed to Dave Russ.")

Suggested Procedures After TAP Exams Have been Administered and Scored. After administering and scoring the TAP exams, the department head (or faculty member overseeing the testing process) should

1. Record scores alphabetically by student name and include name of each student's high school, H.S. teacher's name, date of testing, and students' SSNs. Be sure test score summary is kept for one year from test date.

2. Send the score summary to the division chairman. (The division chairman will forward a copy to the Tech Prep Coordinator.)

3. Determine where high school summary reports should be sent and then send score report.

4. Send students their TAP scores (include what the passing score is). Attach score to a sheet with these reminders (see sample in APPENDIX G):

- Credit is awarded when all TAP procedures have been completed—refer to the Student TAP handbook to see if there are additional steps that need to be completed;

- When students have completed all procedures, they'll receive a "course transfer/exemption form";

- Students who did not pass the TAP exam will NOT be allowed to retake the exam.

5. Check each student's TAP file, and indicate either satisfactory or unsatisfactory completion of TAP exam.

6. Determine which students have successfully completed all TAP procedures.

7. Send completed course transfer/exemption forms to the Student Records Office. (Be sure to date and sign the form!)

RESPONSIBILITIES OF ACADEMIC ADVISORS

All advisors

1. Ask incoming students (any student new to the department) whether or not they've earned any exemption credit through TAP or other types of advanced standing.

2. If student indicates that he/she has received TAP credit, verify that information by asking to see a copy of the course transfer/exemption form or by calling Student Records (or seeing if verification is listed on data sheet).

3. Check "Advising Reports" for continuing students to see if credit appears for a course that would normally be taken in semesters other than the first semester. (Example: student might have received credit for ACC 102.)

University Transfer Advisors

Remind students that credit awarded through TAP can be used as elective credit for the AA/AS degree, but they should not plan on having that credit transfer (or check with the four-year college to determine transferability).